



The Croydon Chronicle

Winter 2017

Letter from the Supervisor

Most folks who live in Maryland enjoy the change of seasons. Count me among those people who look forward to each season with delighted anticipation. I'm ready to see my breath frozen in the air, frost on the ground and the landscape of the forest in winter.

I love spending time outdoors (it's why I do what I do for a living), but I find that in the rush to "get things done," I sometimes sacrifice time outdoors for time in front of a computer screen. This winter, I'm committing to spending at least 10-30 minutes outdoors every day, just to get a better sense of place. As Ferris Bueller said, "Life moves pretty fast. If you don't stop and look around once in a while, you could miss it." Truer words were never spoken. Life can be hectic in our part of the world, especially with so much changing so fast. It's good to

set aside time to just be, to just see where you are, notice the changes, and to acknowledge and reflect on those changes.

Speaking of changes ... here at CCNC, we like to change up our program offerings when we can. In that vein, we are offering two entirely new programs. **Wild About Art** is a process art-based class for children aged 2-5 and their caregivers. It's a great way to expose your child to different art experiences without having to clean up the mess! The first class is Jan. 25, at 10 a.m.

We also have a new program for adults called **Twilight Tasting**. Join Chef Jeff Eng of Clyde's Tower Oaks Lodge to learn cooking tips and tricks and taste some delicious creations from this talented chef. Set for Jan. 27, at 6 p.m., this program will sell out, so register soon!

Don't worry! Not everything is changing here. If you are a fan of our popular **Little Acorns** program or our **Outdoor Science Club** series, both programs are on the schedule for this winter with new topics and activities to excite and engage your children!

Take a few minutes and explore the complete listing of our winter programs in this newsletter. You can also see what we have in store for summer camp, as we've already planned an exciting mix of summer camp favorites and fascinating new offerings for this summer session.

We hope to see you around the nature center this winter, enjoying all that the outdoors has to offer this season!

Best regards,
Elissa Totin
Nature Center Supervisor

Croydon Creek Nature Center

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Hours of Operation

Tuesday through Saturday,
9 a.m.-5 p.m.

Sunday, 1-5 p.m.

Closed Mondays

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Percussion Stick

Supplies:

- A sturdy stick with smooth bark that has a split at the end of it with at least two branches
- String for stringing percussion items
- Several noisemaking items such as buttons, beads, bottle caps, jingle bells, etc.



Directions:

1. Choose a stick and trim it to the right size to be a handheld instrument
2. Measure a piece of string long enough to wrap around the branches and hold the percussion items.
3. Tie your string to one branch and string on percussion items, but don't pack them too tightly because you want them to be able to move and make noise.
4. Repeat this process by wrapping the string between the branches and adding percussion items.
5. Once you have added all your percussion items, finish it off by tying the end to one of the branches.

Adapted from: <http://nurturerstore.co.uk/how-to-make-a-percussion-stick-musical-instrument>



Guided Field Trips

Bring your group to the Nature Center for a guided field trip to learn about a variety of nature topics from our naturalists.

Great for school groups, scout groups, homeschool groups, moms' clubs and more! Programs are available on a wide array of topics. Customized programs are also available.

Find our "Guide to Field Trips" on our website or call us for more information!

Party on the Wild Side!

Plan your child's next birthday party at Croydon Creek! Our nature parties are designed to educate and entertain with hands-on programs that highlight the wonders of nature. Choose from seven nature themes that vary depending on age. Whether you choose to meet our reptiles and amphibians up close or go on a geocaching adventure, Croydon Creek provides an exciting birthday experience! Call us or check our website for more information about themes and how to schedule!

Download our party brochure for more information.

Wake me up when it's warmer

What happens when animal go dormant for the winter

By Melinda Norton,
Assistant Supervisor

Hibernation is a complex subject. *The Oxford Dictionary* defines it as, "The condition or period of an animal or plant spending the winter in a dormant state." Seems simple enough, right? When it gets cold outside, an animal or plant becomes dormant. The complexity begins when we start to look at how science defines this state of rest.

The scientific community defines hibernation as a state of inactivity and metabolic depression in endotherms. There are many things to unravel in that definition. First, what is an endotherm? Endotherm is the scientific term for a warm-blooded animal, those animals who make their own body heat. For the most part, mammals (us!) and birds are endothermic animals. Second, what is a metabolic depression? This is when the body slows itself down to conserve energy. In hibernating animals, this means body temperature, heart rate and rate of respiration decrease drastically. By slowing these processes down, sometimes by as much as 90 percent, energy is saved.

In the winter, why do some animals need to conserve energy? In nature, winter is a barren time. Because of harsh weather, common food sources such as plants and insects are scarce. For animals, including humans, food equals energy. So, if you are an animal that depends on a food source that is scarce in the wintertime, an adaptation must be made. To survive, some animals migrate to warmer climates where their food is more abundant. Some animals can adapt and can change their food source to something that is more abundant in the wintertime. However, some animals are built to hibernate.

Hibernation takes many shapes depending on the type of animal. Some animals, such as groundhogs and other ground squirrels, are considered to be true hibernators. They are herbivores, which means they consume only

plants that are hard to find in the winter. Before hibernation they eat an abundance of plants to build up fat reserves. When the time comes, they go down into their dens for the winter. During hibernation, their heart rate can drop from 80 beats per minute to five, their body temperature can drop from about 99 degrees to as low as 37 degrees, and their breathing rate can go from about 16 breaths per minute to two. For the most part, they do not arouse until early spring.

Bears are another animal that by some are considered to be hibernators. Their metabolic processes, heart rate and breathing slow much like the groundhog's. The debate among scientists comes from the bear's drop in body temperature. While the groundhog and other true hibernators drop their body temperatures down close to freezing, the bear's body temperature only drops a few degrees.

Cold-blooded animals, or ectotherms, undergo a process similar to hibernation. The term for this is "brumation." Like hibernation, brumation includes a slowing of the metabolic processes. The drop in body temperature occurs because ectotherms are unable to control their body temperature. The big difference between hibernation and brumation is that during brumation, the animal needs to drink water. So, on warmer days during the winter, it would not be unheard of to see one of these animals warming themselves in the sun and looking for water to drink before returning to their den, known as a "hibernaculum." Hibernacula may be under a log, in a hole in the ground or under leaf litter in the forest. Some turtles and frogs bury themselves in mud at the bottom of a lake or pond for the winter.

Some animals do not hibernate or brumate to reduce energy loss but

instead undergo a process known as "torpor." This is like hibernation, because metabolic processes and body temperature drastically decrease. However, torpor occurs for shorter periods of time. The length of torpor varies from species to species. During the winter, some animals go into torpor for weeks at a time, but from time to time wake up to consume food that they have cached in their dens. Some animals, however, such as hummingbirds and bats, undergo torpor on a daily basis to conserve energy. Daily torpor often occurs during the coldest parts of the day to help the animal conserve energy for when they need it most for movement and food foraging.

Hibernation also happens during the summer months. This is known as "estivation." It can occur due to food supply issues, as with hibernation, but more often it occurs because the conditions become too hot and dry for the animal to survive. Like hibernation, this process typically involves burrowing into the ground, where the temperature stays cool, and reducing metabolic activity until the harsh conditions have passed.

Whether we are talking about hibernation, brumation or estivation, the state of dormancy is complex and has many variables. The end-game of all of these is the same, though; it is to survive. Survival is the key to the perpetuation of the species. I encourage you to do your own research on this subject to discover more about the different ways animals (and plants!) survive harsh conditions.



Nature Center Camps 2017

Week-long camps start June 19 and run until Aug. 25.

Full and half day options are available

Spend Your Summer at the Nature Center!

New! Advanced Survivor Camp

Age: 9-14 – 9 AM-4 PM

58370 8/14-8/18 \$315/\$375

Art in the Park

Age: 6-8 – 9 AM-3 PM

58371 7/31-8/4 \$220/\$250

EcoInvestigators

Age: 7-10 – 9 AM-3 PM

58355 6/26-6/30 \$225/\$255

58356 7/24-7/28 \$225/\$255

Farm to Table

Age: 10-14 – 9 AM-4 PM

58354 7/10-7/14 \$345/\$395

Guppy Nature Camp

Age: 5-7

9 AM-12 PM

58349 7/17-7/21

\$105/\$125

58351 8/7-8/11

\$105/\$125

9 AM-3 PM

58348 6/26-6/30

\$205/\$245

58350 7/24-7/28

\$205/\$245

58352 8/21-8/25

\$205/\$245



Nature Play Camp

Age: 7-10 – 9 AM-4 PM

58357 6/19-6/23 \$235/\$265

Nature Service Learning Camp

Age: 10-14 – 9 AM-3 PM

58359 8/7-8/11 \$225/\$255

View the Camp Guide online at www.rockvillemd.gov/camps

Croydon Creek Nature Center

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240-314-8770

www.rockvillemd.gov/croydoncreek

The Croydon Chronicle

Winter Programs

Critters Up Close (Adult/Child)

This is for all the animal lovers who want to take a closer look at some of the amazing animals that live at the nature center. Each program features a different live creature and includes a live animal interpretation and craft. Children must be accompanied by an adult.

Age: 2-6

57923	Sa	1/28	10-10:45 AM	\$3/\$5
57924	Sa	2/25	10-10:45 AM	\$3/\$5
57925	Sa	3/11	10-10:45 AM	\$3/\$5

Croydon Creek Ntr. Ctr.

Little Acorns

Explore nature with your little ones through a variety of play-based activities. Time is spent outdoors, weather permitting. Adult participation required. Spaces are limited. Advanced registration recommended.

Age: 18-36 mo

Mammals

57942	Th	2/2	10-11 AM	\$7/\$8
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Snow

57943	Th	2/16	10-11 AM	\$7/\$8
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Forest

57944	Th	3/2	10-11 AM	\$7/\$8
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Amphibians

57945	Th	3/16	10-11 AM	\$7/\$8
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Croydon Creek Ntr. Ctr.

SCOUT BADGE DAYS



JUNIOR GIRL SCOUTS ANIMAL HABITATS BADGE

Sunday, Feb. 5, 2-4 p.m.

WEBELOS EARTH ROCKS ADVENTURE

Sunday, March 5, 2-4 p.m.

Naturalists will help you complete the necessary requirements to complete the badge/adventure.

All materials provided; however, badges are not supplied by the Nature Center. Programs held rain or shine. Dress for the weather.

Cost: \$14 residents; \$16 non residents

For additional information or to register, call Melinda Norton at 240-314-8771 or email mnorton@rockvillemd.gov.

Like us on Facebook



Croydon Creek
Nature Center



To register visit www.rockvillemd.gov/guide

Price key:
Resident Discount/Non Resident Rate

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Website

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City of
Rockville
Get Into It

Hours of Operation

Tuesday through Saturday,
9 a.m.-5 p.m.

Sunday, 1-5 p.m.

Closed Mondays

Winter Programs Continued



Nature Tots (Adult/Child)

Discover the wonders of nature with your child. Each session, a naturalist helps you delve into a different nature topic through nature play, crafts, stories and hikes. Dress for the weather. Adult participation required. Spaces are limited.

Age: 2-5

Bears

57997 Th 2/23 10-11:30 AM \$8/\$10

All About Bones

57998 Sa 3/18 10-11:30 AM \$8/\$10

Croydon Creek Ntr. Ctr.

Outdoor Science Club

Young scientists investigate a variety of science topics through hands-on activities and time spent exploring the forest preserve.

Age: 6-8

Winter

Explore the forest in winter and conduct some cold-weather experiments that highlight what's cool about this season.

58003 Su 2/26 1:30-3 PM \$8/\$10

Amphibians

Hunt for local amphibians as you search in vernal pools and under logs for frogs, toads and salamanders.

58004 Su 3/26 1:30-3 PM \$8/\$10

Croydon Creek Ntr. Ctr.

Spring Night Hike

Enjoy a hike to hear the sounds of spring at night. We'll start in the classroom and learn about the animals we'll hear on our walk and venture outdoors to listen to the creatures of the night.

Age: 5+

57960 Sa 3/25 7:30-8:30 PM \$5/\$6

Croydon Creek Ntr. Ctr.

New! Twilight Tasting

Join us for an evening with Chef Eng from Clyde's Tower Oaks Lodge. Participants will learn cooking tips and tricks and taste some delicious dishes during this interactive cooking demonstration. Register by Jan. 20.

Age: 16+

57955 F 1/27 6-8 PM \$20/\$24

Croydon Creek Ntr. Ctr.

New! Wild About Art

Children become naturally creative through a variety of process art-based projects. Each session will include two to three art experiences. Dress for a mess! Adult participation required.

Age: 2-5

57921 W 1/25 10-10:45 AM \$6/\$7

57922 W 2/22 10-10:45 AM \$6/\$7

Croydon Creek Ntr. Ctr.

Winter Tree ID and Geocaching

Learn how to identify trees in winter in this outdoor program, which combines geocaching with taxonomy. GPS units provided. Dress for the weather. All participants must register.

Age: 12+

57989 Su 1/29 1:30-3 PM \$5/\$7

Croydon Creek Ntr. Ctr.



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